

Notice of Allowability

Application No.

09/899,937

Examiner

Christopher R. Magee

Applicant(s)

SHIMAZAWA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment after final, filed 11/22/05.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 12/06/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.


ANGEL CASTRO
PRIMARY EXAMINER

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.
2. The reply filed 11/22/2005 was applied to the following effect: All relevant objections and rejections are withdrawn as being satisfied.

Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on 12/06/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the information disclosure statement.

Reasons for Allowance

4. Claims 1-14 are allowed.

The following is an examiner's statement of reasons for allowance:

This application is for a MAGNETORESISTIVE EFFECT THIN-FILM MAGNETIC HEAD AND MANUFACTURING METHOD OF MAGNETORESISTIVE EFFECT THIN-FILM MAGNETIC HEAD .

- **Claim 1** specifies a magnetoresistive effect thin film magnetic head, which requires:

“an additional insulation layer formed so that a distance between said lower shield layer and said upper gap layer increases at a location where said magnetoresistive effect multilayer is absent.”

The prior art of record fails to fairly, teach, show or suggest, by either anticipating or rendering obvious, the invention as set forth in the claims of the instant application. Furthermore,

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a search made does not detect the combined claimed elements as set forth in the pending claims. Additionally, the reasons for allowance of the claims over the prior art of record is believed to be readily clear, self evident and apparent from the claim language set forth in each of claim 1 when compared and contrasted with the prior art.

More particularly, the instant invention (as set forth in claim 1) provides an additional insulation layer formed so that a distance between said lower shield layer and said upper gap layer increases at a location where said magnetoresistive effect multilayer is absent. None of the cited prior art of record, however, do not disclose such a magnetoresistive effect thin film magnetic head, as set forth in the manner, function and relationship relative to other claimed structures as prescribed by the independent claims.

- **Claim 6** specifies a manufacturing method of a magnetoresistive effect thin film magnetic head, which requires:

“forming an additional insulation layer in said recess; and “forming and insulation gap layer of an insulation material at least on said additional insulation layer to surround said lower gap layer and said magnetoresistive effect multilayer;”

The prior art of record fails to fairly, teach, show or suggest, by either anticipating or rendering obvious, the invention as set forth in the claims of the instant application. Furthermore, a search made does not detect the combined claimed elements as set forth in the pending claims. Additionally, the reasons for allowance of the claims over the prior art of record is believed to be readily clear, self evident and apparent from the claim language set forth in each of claim 6 when compared and contrasted with the prior art.

More particularly, the instant invention (as set forth in claim 6) provides forming an additional insulation layer in said recess; and forming an insulation gap layer of an insulation material at least on said additional insulation layer to surround said lower gap layer and said magnetoresistive effect multilayer. None of the cited prior art of record, however, do not disclose such a magnetoresistive effect thin film magnetic head, as set forth in the manner, function and relationship relative to other claimed structures as prescribed by the independent claims.

- **Claim 9** specifies a manufacturing method of a magnetoresistive effect thin film magnetic head, which requires:

“forming insulation gap layer of an insulation material on said lower shield layer to surround said lower gap layer and said magnetoresistive effect multilayer;” and “forming an additional insulation layer on said insulation gap layer at a position where said magnetoresistive effect multilayer is absent.”

The prior art of record fails to fairly, teach, show or suggest, by either anticipating or rendering obvious, the invention as set forth in the claims of the instant application. Furthermore, a search made does not detect the combined claimed elements as set forth in the pending claims. Additionally, the reasons for allowance of the claims over the prior art of record is believed to be readily clear, self evident and apparent from the claim language set forth in each of claim 9 when compared and contrasted with the prior art.

More particularly, the instant invention (as set forth in claim 9) provides forming insulation gap layer of an insulation material on said lower shield layer to surround said lower gap layer and said magnetoresistive effect multilayer and forming an additional insulation layer on said insulation gap layer at a position where said magnetoresistive effect multilayer is absent.

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None of the cited prior art of record, however, do not disclose such a magnetoresistive effect thin film magnetic head, as set forth in the manner, function and relationship relative to other claimed structures as prescribed by the independent claims.

- **Claim 12** specifies a manufacturing method of a magnetoresistive effect thin film magnetic head, which requires:

“forming a recess in a part of lower shield layer at a position where said magnetoresistive effect multilayer is to be absent;” “forming a first additional insulation layer in said recess;” and “forming a second additional insulation layer on said insulation gap layer at a position where said magnetoresistive effect multilayer is absent;”

The prior art of record fails to fairly, teach, show or suggest, by either anticipating or rendering obvious, the invention as set forth in the claims of the instant application. Furthermore, a search made does not detect the combined claimed elements as set forth in the pending claims. Additionally, the reasons for allowance of the claims over the prior art of record is believed to be readily clear, self evident and apparent from the claim language set forth in each of claim 12 when compared and contrasted with the prior art.

More particularly, the instant invention (as set forth in claim 12) provides forming a recess in a part of lower shield layer at a position where said magnetoresistive effect multilayer is to be absent; forming a first additional insulation layer in said recess and forming a second additional insulation layer on said insulation gap layer at a position where said magnetoresistive effect multilayer is absent. None of the cited prior art of record, however, do not disclose such a magnetoresistive effect thin film magnetic head, as set forth in the manner, function and relationship relative to other claimed structures as prescribed by the independent claims.

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5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Magee whose telephone number is (571) 272-7592. The examiner can normally be reached on M-F, 8: 00 am-5: 30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christopher R. Magee
Patent Examiner
Art Unit 2653

December 20, 2005
crm


ANGEL CASTRO
PRIMARY EXAMINER